1440
accccgatccccgcccatagtgtaatggctcaactgccaagtcagcattggaccgaaattattggac]
\dot{o}
gtacggattcggg
361

1520	\
tttgaactttaat	ጀ
acgaagtactaatgtgaaaaactttacatttgttattttct actttaatactatg ctatttccaaaat	R6
1441	

- actatgtttttatatatatttagtatatcttaatttttatgcaaattcatctaattgtaattgtattaaactattttcgatccgtgg 1600 1521
- ctaattatttcgaaggcaagtcaaagtgttattgtggactatgtgagctaatattgaacctttatctcccag ϵ cactc 16801601
- aagttaattgaaccaaactcgatcggttgggtttcgagctatttcgagccattgttgttatatgcacgtgagatatcaag 1760 1681
- attgacccgaacactttattatgataatgtagaaaaagaaaacatattctaagactacatgca $oldsymbol{t}$ gcaaagtgcaacccct 18401761
- ${\tt gcatggaaagctgctcaacacgtggcatagactcccgccacgtgtccattccacctcgtcacctcaccccaccgttcac}$
- ctct<u>tattata</u>tcac<u>aacaatcaat</u>caatcctactcctccatactcgaacaaæfccgaccaacttata<u>ccaat</u>attccca ABRE
- GGA ACC ACG CAG AAC G T T Q N TAC GCC Y aacttgattaattctcagcaat ATG GAT CAG ACG CAC CAG/ACA MDQTH HQT
- 909 TCT TAC CAG CAG CCG AGG GGC GGG GGC ACA ATG TAP CAG CAG CAG Ø G 2066 CCG AGC TAT GGC
- 2185 ATC I TCC GGT CTC S G L GCG GGT GGA TCC CTC ATC GTT CTG A G G S L I V L 2126 GTG AAG GCG GCC ACT GCA GCC ACC 35 V K A A T A A T
- CCT P ATC TTC AGC I E S GIC CTTCTCCCIACC ATC ATA GCC I I A CTC TCA S GCC ACC GTC ATT
 A T V T 2186 CTT ACG 55 L T
- 2305 $^{\mathrm{ICC}}$ 999 GGG CTC TTG ATC ACC GIC CTC ATC ACC GCT ø 928 GIC CIIGTT
- 2370 2306 GGG TTC GGA GTC GCC GTC ACC GTC TTG TCC TGG ATC TAT AG gtatgtataagctttggactt $95~\mathrm{G/}$ F G V A A V T V L S W I Y R
- 2450 23% tagtattgttataaaatacataagctgatttatgaacatggatctcccaacaagagttatttaaatgcattctcggtctg

oostsos.compoo

2451	${\tt actcgatcggttgggttttgagctactcggtcacaatggtcgggtcggctctggatctgttatactaatatttggaagcc}$	2530
2531	tgaagtttcattgttctgccccaacttcccactaccttttgagggtgttaagaagccatacaaactaattatgaatccct	2610
2611	cccaacaactcagaactcgagtcagtgggttgtgacggttctctataaacatttcgaaaatctttgttcaatgaacgtag	2690
2691 110	aaatgaccatgcttgatgattgtgggtcttataag G TAC GTG ACC GGC GGG CAC CCG GCG GGA GGG Y V T G G H P A G G	2756 119
2757 120	GAT TCG CTG GAC CAG GCT AGG TCG AAG CTG GCC GGA AAG GCC AGG GAG GTG AAG GAC AGG D S L D Q A R S K L A G K A R E V K D R	2816 139
2817 140	GCG TCG GAG TTC GCA CAG CAT GTC ACA GGT GGT CAA CAG ACC TCT TAA agagagtcctct A S E F A Q Q H V T G G Q Q T S *	2879 156
2880	agttaaattggtcttcgtttctgttcgtggcggcttgtaaactctcttttaagtgtgctgttttccttttgtctcgtgt	2959
2960	gttgtaagtgaaagtgtaatcgaagttccaagttggagatgtttgtaacgatgatgttttc <u>taataa</u> tcagagatattaa	3039
3040	Poly A signal aagggttgctaatttagtattgcgtctgatctcggaccaaactcgcaagtaaaattgcagaggatgagttgtacagaaca	3119
3120	${\tt agcgtgcattgttctggaagttcatcttggagccgaccttgttgcttgc$	3199
3200	acgagttaagcctctgtcaaacagatcgctctagcgtcccagaaaacaccagattttcgaaaaccatcgggggatcaatt	3279
3280	ttcgattcaattccgatcttggaagtacttgaacagaagcatgatgctaaaaagataatagaaaatcgaagcctagaaag	3359
3360	ttgtacagaaagcaacaagtcaaaaatatagatcaacttcaaaggttcaaattacatcttacagaccccaaaaaatgaca	3439
3440	gttaacagaagtcgactaaacagaaaccagccagcttcacctggaatgaaggagctttgatcaatccatcc	3519
3520	tcccctttgaaattgcagacagagctctcatcctgctaaagctggtggcttattcttaaccctgcaatcaat	3599
3600	actaacattggacaccttcatcggcggattgctcgaaaatcagtgagcgagggatttacctgtgtgtagtagtaatcac	3679

3680 tccttgtacataaaatctggaaattccggcat	3680 tccttgtacataaaatctggaaattccggcatcaactactgccacctttctgcttaaggtgattttatcaccaaggctga 3	3759
3760 gcgtgattccttgcgtcttgctccgaatcctg	3760 gcgtgattccttgcgtcttgctccgaatcctgatgtatccactgagctttccatctccttcct	3835
3840 accaatgcgtcctcgccgaacacactcttggc	3840 accaatgcgtcctcgccgaacacactcttggcgtacaagttcgcagccaggaatccacactctccatcaagtgcagacct 3	3919
3920 gcaaaccccaaataagaacacaaactccaaag	3920 gcaaaccccaaataagaacacaaaactccaaagtcaacgatcaattctccgccttttatgaagaaaaggaaacttctgggt 3	3999
4000 acttacggtgccgtcagacacttcatatttgt	4000 acttacggtgccgtcagacacttcatatttgtagacttgatgatgataggtccaggaattccttctcgttctgaattgttgt 4	4079
4080 gttaacagcaacctgacagacagaaagatatc	4080 gttaacagcaacctgacagacagaaagatatcgcaaatttaagatactgggatgactaggcacagagaaatgaaatctaa 4	4159
4160 ttctagaagtaaaaccttatttcccattcaa		4239
4240 agatgtaatccatgatatcgatgtggatatcg	4240 agatgtaatccatgatatcgatgtggatatcgttgaggacgacaactgaacgttccatcacattgg	4305

COCHESS. CEREDO

FIGURE 2-1

1	tctagacatttga <u>cataaaccgaat</u> tcaaagaacacaacattgactaacaccaaaaagaaatagagtagtgaaatttgg <u>a</u> 80
81	agattaaaaaaatagaaac R2
161	gatg
241	ttaattcccatcaagtcttc
321	catcgcaaaggtttgccttcatgttctgctaccagccagc
401	gcgcaagttgacatcccatagtctcgacacttcaccatatggatgtttaaaaacgtatatcacgagtgcgatctacatgtc 480
481	ccatcacaccacatataaagcaatagtttgggagcttttcatatttgaaacgggcattgacgacttgccctctcgataat 560
561	ttaatetttttttteteteagetgattgtgtgeatecattegggeteagaageaeateaaagggateteteeategtagt 640
641	attgggtcgtgtcgtatgatacgaagcagtcgatgaagtttcctaatgtgcgagctacaggctccgcaaagaacccgcga 720
721	ggtagatcgtatgctagtacccaaaaatcagtttgtcgtagcggaatcaacactagagactcaccctaatgcatctcatg 800
801	tgtgatgaacagtttatcatttgtgagtctaggggt <u>cattg</u>
881	RS aataggaagcgttttccacccagatcacgaatagctaccctttttcgggcgccaaatttccggcatcctatcttccacc 960
961	acaacttaaaagatgcgatcggtaaggaactcaccgaccacacaca
1041	agtccctcaatttcctcaacctagtcttcaatcgccgctagcgttatccccgcatatggactttcatagcgcggagcgt 1120
1121	agccggagacgacgacgagcaagaaggatgagcggccagattgcggctaaagaaacgagcttcctgccttgctctatggag 1200
1201	gcagatttctgagttgatggtgatggatttgtgatgtggacacttttaatttaagttgatttttagcacttcattca
1281	taattaaataaataatttccagtattttatattttccttacgttatctaatttttga <u>aagattaaaa</u> ctttgatat 1360 R4

FIGURE 2-2

- 1520 aggcaagatcatgacacgtcgaagttaagtgaatgagactcctaacaaggtaataacaaagcagtt<u>cataaaccgaatga</u> 1440 ccttgatctttactaagcttgagatcattgaacata<u>taattaaata</u>cgttaatgaaagataagaactttaatataaaaat 1441
- 1600 cattcaaaacgagaaactgataacaaaaacaaagcaaacggccaacaaataatagacggtggaaggatg<u>atgcagagcc</u> 1521
- 1680 ${\tt atccaccctttttcccagtttccttactgcttacttctctatgcatatcacaagacgcccttgaaacttgttagtcatg}$ 1601
- 1760 <u>cagagcc</u>cttactcgccaggtcaccgcaccgtgttactctatcacttctcctccctttcctttaaagaaccaccacgc 1681
- 1840 cacctcctctcacaaacactcataaaaaaaccacctcttgcatttctcccaagttcaaattagttcacagctaagcaag 1761
- 1903 CAC H CAG Q ACC CAC H GIC CAG Ø GTC V CAA O CAC H CAG CCA Q P ACA ACA T CGT R aactcaacaaca ATG GCG GAT M A D 1841
- 1963 CAT Ξ CCA Д GGT 299 ഗ AAA × CIC GGA G GGT ტ GAA TAT CGTĸ 000TTCGCT Ø GGG 266 G ACC CCC TAT 1904 CAC 工 18
- 2023 909 ATG ACC GIC GCA TTAGTGAAG TCC GCT TCACCA P 299 AGC 299 TCA GGA G CAA CAG Ø CAC 1964

•

- 2083 ATC ATG ACG T GGG GCT Ø TIG ACC ATA 999 G gcc $_{
 m TTG}$ g_{CC} CITCTCACC T 999 399 G ATC I CCC 2024 CTC П 28
- 2143 GCT Ø CCC 500 GIC CTA GTT CCI AGC TGC ATC GIC $_{
 m TTT}$ ATT CCG ACC ACC ATC 909 CIG 999 2084
- 2203 GGG G ACA CTG 999 g_{CC} ATG 999 TCG CCC CIG $_{
 m LLL}$ 909 AGC GIG 000 $_{
 m LLL}$ GGG ATC CIC CIG 2144
- 2263 137 \mathtt{GTG} GGA GTT GGA CAG GGG GCT CAG CAG CIGTAT AGG R gag TTT $^{
 m TGG}$ TCG CTGTCG S ACC T CIG2204
- 2323 157 ATG TAT 999 GCT GCT GAT CAG ATG ၁၅၁ AGG AAG 909 CAG GAG TIC AGT GAT SCG GTG 999 ტ 2264

FIGURE 2-3

gtagtggaatgaatgagttettgttetettttgtettttaateataaagtaagaageageattteatgt 2533 attgteaagaattegeaacaaatttagetaaaceagtteaatettaeeggttagaegaetteeeagtaa 2613 ggteeateeeggtataaagagtetggaettetgaaaeetttagaeettggatttggaaaaaagatgaaae 2693 attaeaaaegatggeagattgtaeaaaaetggagtegagateatgtaaattageeeataaetaagaaeeg 2777	agaatgtgagaaccgaatcatcgacgaacattacccggcgagagcccatttcaagcaactttggaactcctatatggct 293 gttccagcagggcacctgctcaagaaagaagccatgtcagaaatccttacgaaatctaactggatgctgatatgaa 301 tccgccaggtgtgcggagttctttacaggcaggatctataaaagaagaaacatgttttgtattggcattgttgatgttcca 309 agcacgcagcggtctatctccggatcctaacaacaaaaatacggattctgtaagaaacaagcgcagaaaacttttggattcgcaac 317 gaaaccactcgtatatttggttctgagttggagaaagatgaccatactactactgtatttggttgaacttggattggaaccga 325 aattttgagttgaaaagcgagtgatcgtatataaatttcagattcagattaggatatcctatgagagaaggtagagttac 333 ctgatactacatactgcccatcaggggtaaaagttgcctcgatggttgtgtttggagatggttccaggctaaatccacaa 341 cgctgaacaaaattaaaaagatgaatcgatcaatcttcaaacccttacttctgcatttatgaggattggctcaaagcctctca 349
aattactaggaatatggttgttgggctggtcggcggctagcggtgatgattggaagaatcggggatcc	agaatgtgagaaccgaatcatcgacgaacattacccggcgaggaggggttccagcagcagcagcagcagcactgtcagaagaaaga
gcgatgacaacaa	agaatgtgagaac gttccagcaggcgat tccgccaggtgtg agcacgcagcgat gaaaccactcgta aattttgagttga ctgatactacata cgctgaacaaat
	3020 3020 3180 3260 3340 3420

D9645593 D82500

FIGURE 3-1

1	tccactatgtaggtcatatccatcatttttaatttttgggcaccattcaattccatcttgcctttagggatgtgaatatga 5' primer (1) AT rich	80
81	acggccaaggtaagagaataaaaataaat ${ m ccaaattaaagcaagagaggccaagtaagataatccaaatgtacacttgtca}$ AT ${ m rich}$	160
161	togcog <u>aaattagtaaaata</u> cgoggcatattgtattoccacacattattaaaaatacogtatatgtattggotgcatttgc	240
241	atgaata RY RY G box seed-specific	320
321	ctccactatataaacccaccatccccaatcttaccaaaccca	400
401	ccaatcaccaaaaaATGGCAAAGCTGATGAGCCTAGCAGCAACGCAGTTCCTCTT M A K L M S L A A V A T Q F L F	480
481	GCATCCGTCCGAACCACAGGAGGAGGACCAACCAAGGCCGCGGTGGAGGTGGCAGGGACAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCA	560 48
561 49	AGTCTGCGAGCAGCAGCAGCGAGACTTCCTGAGGAGCTGCCAGCAGTTCATGTGGGGAAAAGTCCAGAGGGGCG	640 75
641 76	GCCACAGCCACTATTACAACCAGGGCGTGGGGGGGGGGG	720
721 102	AGCAATTGCGCACCGCGGCACCATGCCAGGGGACTTGAAGCGTGCCATCGGCCAAATGAGGCAGGAAATCCAGCAGCA S N C A P R C T M P G D L K R A I G Q M R Q E I <u>Q Q Q</u>	800
801 129	GGGACAGCAGCAGCAGCAGCAGGAGTTCAGAGGTGGATCCAGCAAGCTAAACAAATCGCTAAGGACCTCCCGGAC	880

155

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Н Ø ĸ ø

Ø Ø Н 3 召 Ø

FIGURE 3-2

381 156	AGTGCCGCACCCAGCCAATGCCAGTTCCAGGGCCAGCAATCTGCATGGTTTTGA <u>aggggtgatcgatta</u> tga 960 C R T Q P S Q C Q F Q G Q Q S A W F * 5'primer (2) 175	60
961	gatogtacaaagacactgctaggtgttaaggatggataataataataataataa 100	1040
041	cagctgtaataaagagagagagagagagagagagagagag	1120
121	gtatgtttcttggtttttaaaataaatgaaagcacatgctcgtgtggttctatcgaattattcggcggttcctgtgggaa 120	1200
201	aaagt ${ t ccagaagggcgcgcagctactactacaaccaaggccgtggaggagggcaacagagccagcc$	1280
281	ctgcgatgatcttaagcaattgaggagcgagtgcacatgcaggggactggagcgtgcaatcggccagatgaggcaggaca 136	1360
361	tccagcagcagggacagcagcaggaagttgagaggtggtcccatcaatctaaacaagtcgctagggaccttccgggacag 14	1440
441	tgcggcacccagcctagccgatgccagctccaggggcagcagcagtctgcatggttttgaagtggtgatcgatgagtcg 15;	1520
521	tataaagacactgctaggtgttaaggatgggataataagatgtgtgttttaagtcattaaccgtaataaaaagagagag	1600
601	ctgatggaatgttatgtatgtttcttggttttttaaaattaaatggaaagcacat <u>gctcgtgtgggttctatc</u> 16' 3'primer (2)	1676

O9545593.O8E500

FIGURE 4-1

ctcaagcatacggacaaggtaaataacatagtcaccagaacataaacaaaaggtcagaagacaaaaaattagctatggacattcaggtc ctcaagcatacggacaacaacaggtcagatcacttcctcctctctct	aaagtgcagaagc 160 ttgagaggccttg 260 tctatctccat <u>ta</u> 360 atcgtgcacgatg 460 tttttcaggttcc 560 attgaaatcgaag	aagataaa 170 ggactaac 270 ggtctgaa 1R1 370 attggata 470 attgtgaa	isaaattagcta 180 280 gatgac <u>tctto</u> 380 cctgtggaggag 480 igcctttagago	tggacattcagg 190 290 acaccaacgacgints 181 390 gagtgtttgctg 490 ttgagcttcctt	gttc 200 300 gttt 400 gatt 500 tcca
tratcctagtcttgtgaccatccttcctcctgctcta 220	160 260 tctatctccat <u>ta</u> 360 atcgtgcacgatg 460 tttttcaggttcc. 560 attgaaatcgaag	170 ggactaac 270 ggtctgaa IR1 370 attggata 470 attgtgaa	180 gagaggtcagt 280 gatgac <u>tcttc</u> 380 ctgtggaggag (ctgtggaggag	190 Ltgggatagcage 290 IR1 390 Igagtgtttgctg 490 ttgagcttcctt	200 300 300 gttt 400 gatt 500 tcca
tratectagrettgtgaceatectteeteetgeteta 220 230 240 250 ctttetggtgttteagagtettegtgeegetetae 320 330 340 350 ctectagettgeaatacetggettgeaatacetggag 420 430 440 450 ggtgatttgaettegattteagtttaggettgttgaa 520 530 540 550 cgaatteteetagagaaaagggaagtegatetetgag IR2 IR2 IR2 620 630 640 650	ttgagaggccttg. 260 tctatctccat <u>ta.</u> 360 atcgtgcacgatg 460 tttttcaggttcc. 560 attgaaatcgaag	ggactaac 270 ggtctgaa 1R1 370 attggata 470 attgtgaa	igagaggtcagt 280 <u>iga</u> tgac <u>tcttc</u> 380 ictgtggaggag igctttagagc	tgggatagcaga 290 acaccaacgacg IR1 390 Igagtgtttgctg 490 ttgagcttcctt	atcc 300 gttt 400 gatt 500 tcca
220 230 240 250 ctttctggtgtttcagagtcttcgtgccgccgtctac 320 330 340 350 ctcctagcttgcaatacctggcttgcaatacctggag 420 430 440 450 ggtgatttgacttcgattcagtttaggcttgttgaa 520 530 540 550 cgaattctcctagagaaaagggaagtcgatctcgag IR2 IR2 620 630 640 650	tctatctccat <u>ta</u> 360 atcgtgcacgatg 460 tttttcaggttcc. 560 attgaaatcgaag	270 ggtctgaa IR1 370 attggata 470 attgtgaa	280 gatgac <u>tcttc</u> 380 ctgtggaggag 480 gcctttagagc	290 acaccaacgacg IR1 390 gagtgtttgctc 490 ttgagcttcctt	300 gttt 400 gatt 500 tcca
ctttctggtgtttcagagtcttcgtgccgccgtctac 320 330 340 350 ctcctagcttgcaatacctggcttgcaatacctggag 420 430 440 450 ggtgatttgacttcgatttcagtttaggcttgttgaa 520 530 540 550 cgaattctcctagagaaaagggaagtcgatctctgag IR2 IR2 620 630 640 650	tctatctccat <u>ta</u> 360 atcgtgcacgatg 460 tttttcaggttcc 560 attgaaatcgaag	ggtctgaa IR1 370 attggata 470 attgtgaa 570	igatgac <u>tetto</u> 380 ctgtggaggag 480 igcetttagagc	IR1 390 Igagtgtttgctg 490 ttgagcttcctt	gttt 400 gatt 500 tcca 600
320 330 340 350 ctcctagcttgcaatacctggagggaggtgatttgacttcgatttcagtttaggcttgttgaaa 550 cgaattctcctagagaaaagggaagtcgatctctgaggaggaagtctgatctctgaggaagtcgatctctgaggaagtcgatctctgaggaagtcgatctctgaggaagtcgatctctgaggaagtcgatctctgag	360 atcgtgcacgatg 460 tttttcaggttcc. 560 attgaaatcgaag	370 attggata 470 attgtgaa 570	380 ctgtggaggag 480 gcctttagagc	390 gagtgtttgctg 490 ttgagcttcctt 590	400 gatt 500 tcca 600 tcca
ctcctagcttgcaatacctggcttgcaatacctggag 420 430 440 450 ggtgatttgacttcgatttcagtttaggcttgttgaa 520 530 540 550 cgaattctccctagagaaaaagggaagtcgatctctgag IR2 550 640 650	atcgtgcacgatg 460 tttttcaggttcc. 560 attgaaatcgaag	attggata 470 attgtgaa 570	ctgtggaggag 480 gcctttagagc	gagtgtttgctg 490 ttgagcttcctt 590	gatt 500 tcca 600 tcca
420 430 440 450 ggtgatttgacttcgatttcagtttgattgaa 520 530 540 550 cgaattctcctagagaaaagggaagtcgatctctgag 1R2 1R2 620 640 650	460 tttttcaggttcc. 560 attgaaatcgaag	470 attgtgaa 570	480 Igcctttagago	490 ttgagcttcctt 590	500 tcca 600 tcca
ggtgatttgacttcgatttcagtttaggcttgttgaa 520 530 540 550 cgaattctcctagagaaaagggaagtcgatctctgag 1R2 1R2 620 630 640 650	tttttcaggttcc. 560 attgaaatcgaag	attgtgaa 570	Igcctttagago	ttgagcttcctt 590	tcca 600 tcca
520 530 540 550 cgaattctcctagagaaagtcgatctctgag IR2 IR2 640 650	560 attgaaatcgaag 660	570	0	590	600 tcca
<u>cgaattctc</u> ctagagaaa <u>gggaagtcgat</u> ctctgag IR2 IR2 630 640 650	attgaaatcgaag 660	1 1	280		tcca
630 640	660	itgcacatt	tttttcaacg	ıtgtccaatcaaı	
		019	680	069	700
caaacaaagcagaagacaggtaatctttcatacttatactgacaagtaatagtcttaccgtcatgcataataacgtctcgttccttcaagaggggttttc	cttaccgtcatgc	ataataac	gtctcgttcct	tcaagaggggtt	tttc
720 730 740 750	760	770	780	790	800
cgacatccataacgacccgaagcctcatgaaagcattagggaagaacttttggttcttcttgtcatggcctttataggtgtcagccgagctcgccaattc	ttcttcttgtcat	ggccttta	ıtaggtgtcagc	cgagctcgccaa	attc
810 820 830 840 850 860 870 880 800 900 ccgtccgactggactcgcaacggtattgagcaggacctattgtgaagactcatctcat	860 ataactccacggt	870 attgagca	880 Iggacctattgt	890 gaagactcatct	900 tcat
910 920 930 940 950 960 970 970 980 1000 ggagcttcagaatgtggttgtcagcaaaccaatgaccgaaatccatcacatgacggacg	960 cggacgtccagtg	970 ggtgagcg	980 gaaacgaaacag	990 Igaagcgcctate	1000 ctt
1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 cagagtegtgagetecacacaceggatteeggcaactaegtgttgggcaggettegecegtattagagatatgttgaggcaagaeceatetgtgecaetegta	1060 gccgtattagaga	1070 tatgttga	1080 Iggcaagaccca	1090 itctgtgccacto	1100 cgta
1120 1130 1140 1150	1160	1170	1180	1190	1200

Deetsee . Deesoo

FIGURE 4-2

1210 1220 1230 1240 1250 1260 1270 1280 1290 1300 ctgatatcccgtcatttgcacgtgcgcgccgtgccctgtgcctgcc	ADKE 1330 1340 1350 1360 1370 jagtttgggggtctccgcggcgatggta <u>gtggggttgacgg</u> tttggt <u>gtggg</u>	R1 1430 1440 1450 1460 1470 1480 1490 1500 acaattcattagaattagaactggaagtgatgagaggattaagtcagagttccaacagagttacatcttaaga	1530 1540 1550 1560 ttatatatttgcaattaaaaaaataatttaa <u>cttttaga</u>	RZ 1630 1640 1650 1660 1670 1680 1690 1700 tgtatgtctcccctctaaataaacttgggtattgtgtttacagaacctataatcaaataatcaatc	1710 1720 1730 1740 1750 1760 1770 1780 1790 1800 tgcagttaattgaagggattaacggccaaaatgcactagtattatcaaccgaatagattcacactagatggccatttccatcaatatcatcgccgttctt	1830 1840 1850 1860 1870 1880 gaaacttgagagacacctgcacttcattgtccttattacgtgttacaaaatgaaacc	1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 gaatggcgaaccatccatttcaccatctccaccatccacttcaccatccacttcaccatccacttcaccatccacca	2030 2040 2050 2060 laaagatacccaccATGCTAGATCATCAAGCCCTTTGCTTCTC	Signal sequence 2130 2140 2150 2160 2170 2180 2290 AGCAGGGGAACGAGGCCAGATCGACGATCGAGCAGCAGAAACCATCCAGGCAGAAGCTGGCACAT	2230 2240 2250 2260 2270 2280 2290 2300 CCAGCAATICCAGTGCTGTTGTCTTGTAAGGCGCACCATTGAGCCCAAAGGTCTTCTTTGTACAGCA
1230 acgtgcgccgcct	ADKE 1330 tttgggggtctcc	1430 attcattagatta	1530 <u>tatata</u> tttgcaa	1630 atgtctccctct	1730 ggccaaaatgcac	1830 aaacttgagagac	1930 tccatttcttatg	2030 aagatacccaccA	2130 AGGGGAACGAGTG Q G N E C	2230 GCAATTCCAGTGC
1220 atttgcatco	1320 ggaggttgag	1420 gcagaaaaca	1520 ctttagactt R2	1620 aactatttgt	1720 agggattaac		1920 accettece		2120 CAATTCCAGC Q F Q	2220 ACCAGAACCGCCA
1210 ctgatatcccgtc	1310 cttaccgatgggt	1410 1420 ttcaaattctttggcagaaaac	1510 1520 aataatgtaacccctttagact	1610 1620 ttatttatatcgaaactatttg	1710 tgcagttaattga	1810 1820 cttctgtccacatatcccctct	1910 gaatggcgcaaga	2010 2020 tcactacttgcttatccatcca	2110 212C TCTGGGTAGGCAGCAATTCC L G R Q Q F	2210 2220 GAGGTATGGGACCAGAACCGCC

DOM+SEOS . OSESOO

FIGURE 4-3

3200

3190

3180

3170

3150 3160

3140

3130

3110 3120

GTGGAGGAGCCTTCTGCTCCATGAGACTTGAGAACATCGGCGGCGGCGGCGGCGGCGGCGGCCGCGTTAGATCCCTCA V E E T F C S M R L I E N I G D P S R A D I F T P E A G R V R S L

COMPANDA LOGUECO

FIGURE 4-4

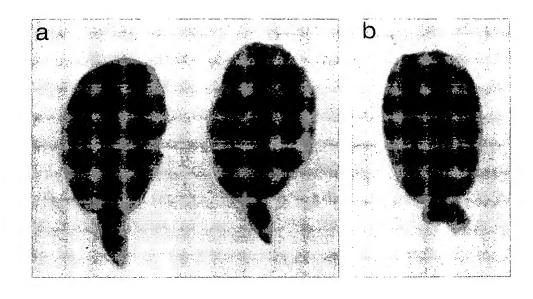
3300 attga	3400 ATAGT I V	3500 recce / P	3600 3AGGA R	3700 ACTCA T H	3800 aataa	3900 :tttg	4000 acaac	4100 aatga	4200 sccct
tctaaa	ACAGCA H	GACGGT(0 16CCGGG) AGGAGA Q E	.gaaata) :gctaat) Igaagaa) stttaaa) :cacaat
3290 accaac	3390 ACGCAC	3490 GGTGGT(3590 TCGCTA	3690 ACAGGC/ N R (3790 gacggt	3890 :ggtggt	3990 caatcg	4090 aaaagc	4190 cggaat
0 tcacgo	O ACATCA N I	180 SAAGGACA(E G Q	O GTGAAC V N	O AGTTC? K F	io Aaatgt	10 Igtaged	0 aatcto	10 Itccctc	30 actgcc
3280 tctcact	3380 ACTGGAA(H W N	3480 GCAGGAAC	3580 GCGATGG' A M	3680 GGGTGAA(R V K	3780 TATGTAAa M *	3880 gagccag:	3980 Itaaaata	4080 Joaactat	4180 attacta
3270 Jtataga	3370 TGCCGC L P	3470 GAGTGCT(G V L	3570 SGACAAC D N	3670 scgagga a r	3770 ACTIGCT: N L L	3870 ytgtaat	3970 aatttta	4070 agttctg	4170 attatta
racaatg Y N) ATCAGGO I R	50 TCGATGO F D (SACCAAC T N	SAGGAGG E E	0 TGATCAA V I N) ygaaatç) attttaa) scgaaca) tactata
3260 STTCTCT	3360 SAAGCGA' E A	3460 CGGTGTT	3560 STTCAAGA F K	3660 rcgccgg/ s P 1	3760 AGGAGGTK K E V	3860 ggaaggg	3960 tcatgaa	4060 gcatcac	4160 tactaata
3210 3220 3290 3300 3250 3260 3270 3280 3290 3300 ACAGCCACAAACTCCCCGTCCTGCAATGGATCCAGCTTAGGGGGGGG	3330 3340 3350 3360 3370 3380 3390 3400 gatatctgaccgacttgaattttgtagGAAGCGATCAGGCTGCCGCACTGGAACATCAACGCACACATAGT E A I R L P H W N I N A H S I V	3430 3440 3450 3460 3470 3480 3490 3500 PAGAGTCCAGATCGTGAAGGGAATTCGGTGTTCGATGGAGTGCTGCAGGAAGGA	3530 3540 3550 3560 3570 3580 3590 3600 NGATCCCAGAGCGAGAGGTTTGAGTGGCGTTCAAGACCAACGACGAACGCGATGGTGAACTCGCTAGCCGGGAGGA R S Q S E R F E W V A F K T N D N A M V N S L A G R	3610 3620 3630 3640 3650 3660 3670 3680 3700 CATCGCCAGTAAGGGCGATCTCTGGCTAACGCCTGGAGGGTGTCGCCGGAGGAGGGGGGGG	3710 3720 3730 3740 3750 3760 3770 3780 3790 3800 CTTGGCTAGCACCAGGGCCAGTCGCCCGGGAGGTTGAATGTCGAGGGGGGGG	3810 3820 3830 3840 3850 3860 3870 3880 3890 3900 cggtaaaatatatgtaataataataataaagccacaaagtgagaatgaggggaaaggggaaatgtgtaatgagccagtagccggtggtgctaattttg	3930 3940 3950 3960 3970 3980 3990 4000 gaattttgtgggtttttatgtgttttttaaatcatgaattttaaaattttataaaataatctccaatcggaagaacaac	4030 4040 4050 4060 4070 4080 4090 4100 tttacccaaatctagttcttgagaggatgaagcatcaccgaacagttctgcaactatccctcaaaagctttaaaatga	4130 4140 4150 4160 4170 4180 4190 4200 ttccaaagatcccaaacgaaacatattatctatactaataattaat
GCCGAG A E	tgaatt	AGGAAG E E	TGAGTG(GCCTGG A W	TGAATG L N	gtgaga	tgttt	tgagag	acatat
3240 CTTAGC	3340 ccggttt	3440 TGAACG; V N J	3540 GAGGTT	3640 GCTAAC	3740 GGAGGT1 G R I	3840 cacaaa	3940 tttatg	4040 agttct	4140 aacgaa
3230 GGATCCAG W I Q	3330 ctgaccga	3430 CCAGATCG Q I	3530 CAGAGCGA Q S E	3630 ATGTACTG D V L	3730 GrcGcccG S P	3830 aataaagc	3930 ttgtggtt	4030 ccaaatct	4130 agatccca
32 CAATGG Q W	33 atatct	34 GAGTCC R V	353 ATCCCAG	36; GCGGAT(A D	37 CCAGGT S R	38 taataa	39 aatttt	40 ttacco	41 ccaaag
3220 GTCCTG V L		3420 SAAGCCA Q A	3520 'AAAGAG; ' K R	3620 ATCCCC I P	3720 seccagi g Q	3820 Itaataa	1.1		4120 saacgtt
CTCCC	tttaat	.410 3420 TCAGAGACAAGCC I R G Q A	3510 3520 TCGCGGTGGTAAAG F A V V K	3610 3620 SCAGTAAGGGCGATCCC A V R A I E	CCAGGG TR	atgtaa) caataa) atggat) Icagago
3210 3220 GCCACACACCTCCCGTCCT S H N L P V I	3310 3320 atccctaattatttaattcacc	3410 3420 GTACGCGATCAGAGGACAAGCC Y A I R G Q A	3510 3520 CAGAACTTCGCGGTGGTAAAGA Q N F A V V K	3610 3GCAGTA <i>2</i> A V	3710 SCTAGCAC A S	3810 maaatata	3910 3920 tatcgtattgtcaataaatcat	4010 4020 attccatatccatggatgtttc	4110 4120 acaacaaggaacagagcaacgt
ACAGC N S	atcc	GTACG Y	CAGAACT Q N	CATCGG T S	CTTGGCT# L A	cggta	tatoç	attcc	асаас

ossinas, cersoo

FIGURE 4-5

4210 4220	4220	4230	4240	4250	4260	4270	4280	4290	4300
שמנשמנינינים	raactacaayee	550551151	cyyayaayrg	arcddcdcg	gcgagaagca	gcggactcg	gagacgaggc	ayeeriyiryyeyyeyyayaayigareggegegegegagaageageageagegegaeteggagaegaegaggeettggaatgageagagte	agagtc
4310 4320	4320	4330	4340	4350	4360	4370	4380	4330 4340 4350 4360 4370 4380 4390 4400	4400
tttacctgccagggcgtgaagg	gcgtgaaggggaa	agagcggcct	tctggagtag	gagttcago	aagcggcggt	tccttggcg	gagtaagcgg	yggaagagcggccttctggagtaggagttcagcaagcggcggttccttggcggagtaagcggacgcaagggtggntgtc	yntgtc
4410 4420 4430 4440 4450 4460 4470 4480 4490 4500	4420	4430	4440	4450	4460	4470	4480	4490	4500
gacgtentegtttenggaggegnatteatgaagggttaaagteanatetgtagetetegagtgeteagggaggenaaagaegttgggaaaeegtegnegt	cnggaggcgnatt	ccatgaaggg	Ittaaagtcan	atctgtago	tctcgagtgo	tcagggagc	cnaaagacgt	tgggaaaccgt	sgncgt
4510 4520 4590 4540 4550 4560 4570 4580 4590 4600	4520	4530	4540	4550	4560	4570	4580	4590	4600
ttggggcatcagtcngcggggcacgcttccctcctgctgctccanaancnangtanatttaaaaganatgggaaattaantaatggnaatnannaggagg	cngcggggcacgc	sttccctcct	gctgctccan	aancnangt	anatttaaaa	ganatggga	aattaantaa	tggnaatnanna	aggagg
4610 4620		4630	4640	4650	4660	4670	4680	4630 4640 4650 4660 4670 4680 4690 4700.	4700
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4710 4720 4790 4800	4720	4730	4740	4750	4760	4770	4780	4790	4800
gaggntincannngnnagggagaaaaagganncattinannangcngagggacatgaancggtacngagctgnggttcannnancggcgnnnggnagtcc	gnnagggagaaaa	aagganncat	ttnannangc	:ngaggaca	tgaancggta	cngagctgn	ggttcannna:	ncggcgnnnggr	nagtcc
4810 4820 4830 4840 4850 4860 4870 4880 4890 4900 cnngggaccnggntggggtnanaagggaacattnggtnggcncntncgggt	4820	4830	4840	4850	4860	4870	4880	4890	4900
	tggggtnanaagg	ygaanggaac	attnggtngr	langganaan	accnttttac	nattgcctt	tgcaggnnng	tntnggcncntr	ncgggt
4910 4920 4930 4940 4950 4960 4970 4980 4980 4990 nacatneegetgeatggggetttgggggngeeneanggeneatgg	4920 atgggctttgggg	4930 yngccnanag	4940 Ignagcencar	4950 Igggnanncn	4960 Igccnccttgt	4970 ncanqncqc	4980 tnaaqttcna	4990 ttgtanatggno	oatta

Figure 9.1



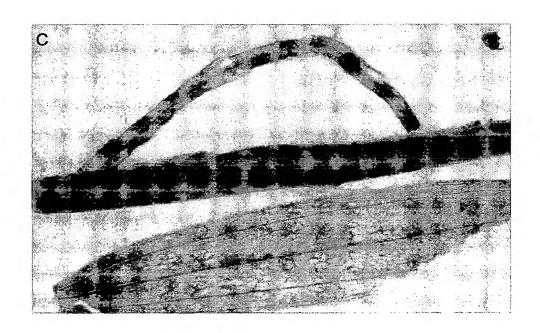
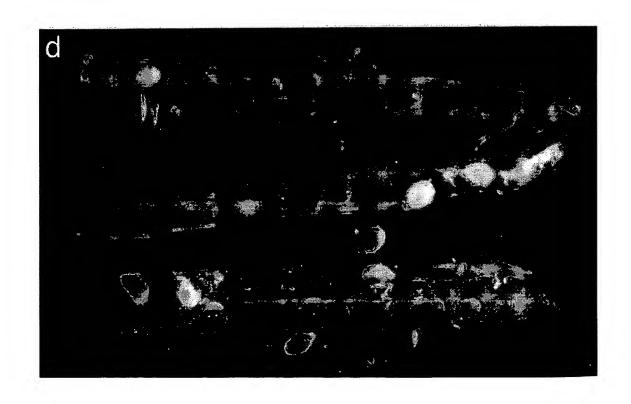


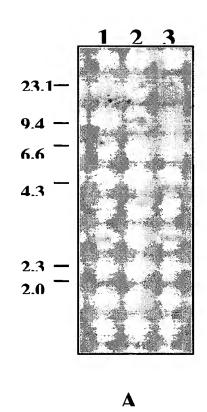
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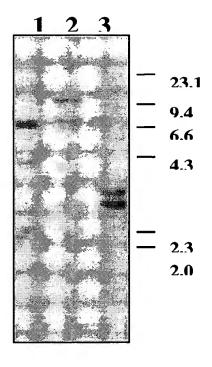


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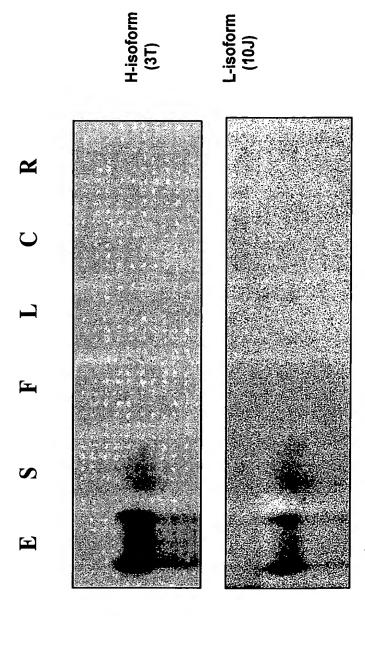
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401	R2 ggttcgggtgaagacgattgttgatcccaataatgtgtttcgaaacgagcagagcattccctcaattccaactcggttat 480
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561	tcatttagattaattcataacaactattaatttaccagccttttatccggcccgttggccgatttattt
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721	R3 tatcggataaaaataaaaatatt <u>taaaat</u>
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881	tatcacttaattaaatacaatagataaatcgttaattctataacattaacctatacacttgcacggtg <u>aa</u>
961	R5 <u>caat</u> atgataatataataataatataataaattcaattattaatctacaatttttt
041	${ t tctgcaagctccgagctccttgtcatcgttagtttctgcggtctcaaggtataacgactc } { t gaagcgaccaagccctttgct}$
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201	cctaaactagagggtgattagggtgaaattagggtgttggcctgggttccattgtccaaagttttagtcaacttaaaaac 1280
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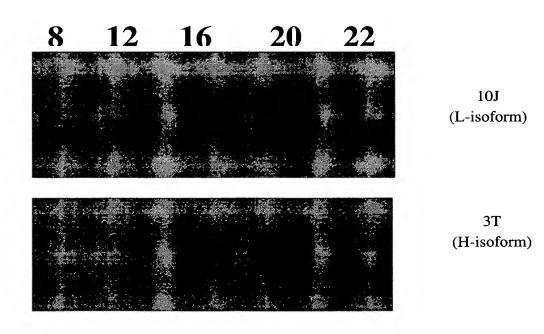


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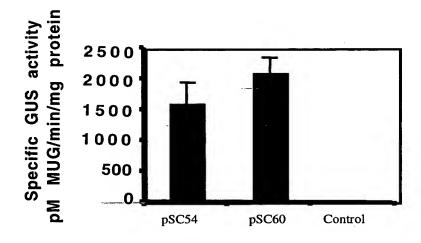


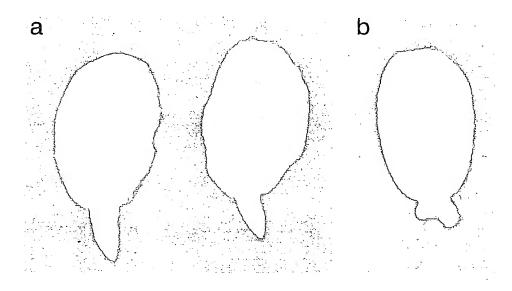
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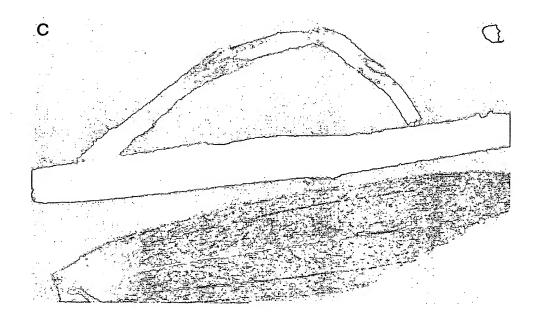
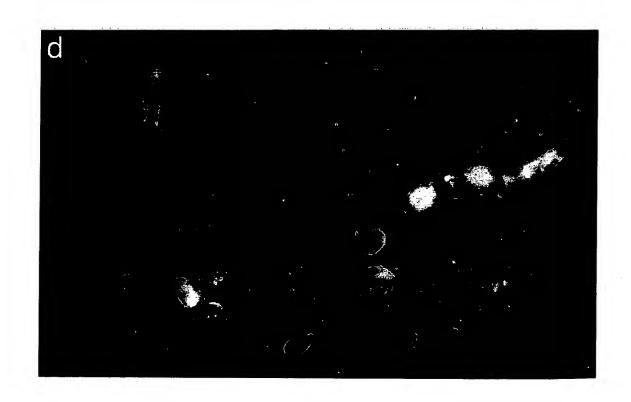


FIGURE 9D





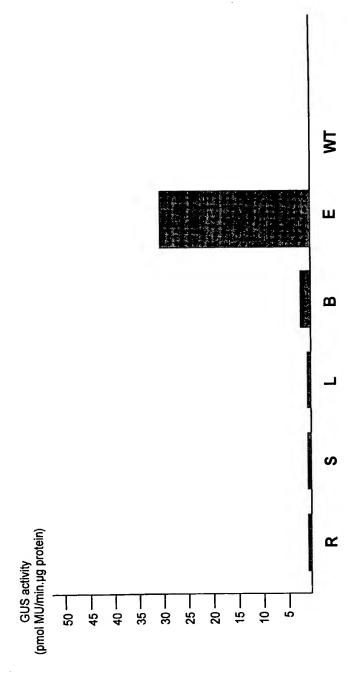


FIGURE 11

